

**REMARKS**

**Status of the Amendments**

Claims 1-14 and 16-23 are pending. Claims 1, 2 and 19 have been amended. New claims 21 to 23 have been added. No claims have been cancelled by this amendment.

**Interview**

Examiner Nguyen is thanked for the courtesies extended to Applicants undersigned representative during the telephonic interview of November 8, 2007. During the interview, the merits of the rejection over the Guinther/Mizuno combination were discussed, including arguments similar to those set forth below. Certain amendments for overcoming the rejections were also discussed, including amending the claims to reference "a two stroke engine fuel" in the body of the claims, as opposed to in the preamble. While no agreement was reached on these issues, the Examiner did agree that further limiting the claims to recite a detergent comprising charged polar groups and aliphatic, cycloaliphatic or alkylaromatic chains, would likely overcome the Guinther/Mizuno combination. The Examiner further indicated that an update search would be required. Accordingly, Applicants have inserted such limitations in the form of dependant claims 21-23, and assert that these claims are allowable.

**Rejection Under 35 U.S.C. § 102(e)**

The Office has rejected claims 1-6, 8-14 and 16-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,821,932 ("Guinther") in view of U.S. Patent No. 6,684,627 ("Mizuno") for the reasons provided at pages 2 to 7 of the outstanding Office Action. Applicants respectfully traverse the rejection.

Applicants' claim 1 recites a composition comprising: a combustible hydrocarbonaceous liquid fuel; lubricant comprising an oil of lubricating viscosity; a detergent comprising an alkaline earth metal-containing compound; and a molybdenum source, wherein the composition is a two-stroke engine fuel. No such composition is taught or suggested by the Guinther/Mizuno combination.

As discussed in the previous responses filed May 7, 2007 and November 20, 2006, Guinther does not specifically teach a detergent comprising an alkaline earth metal-containing compound. In order to satisfy the detergent element of the claims, the Office has relied upon a teaching of calcium at column 6, line 18 of Guinther. According to the examiner, this amounts to a teaching of a detergent comprising an alkaline earth metal-containing compound.

However, Guinther's reference to calcium is merely an example showing results of an elemental analysis of oil used in a 1998 Cummins engine operated during thermal gravimetric analysis testing. Such a general teaching of "calcium" does not amount to a teaching of a detergent comprising an alkaline earth metal-containing compound, as recited by the present claims. Accordingly, applicants assert that Guinther does not specifically teach a detergent comprising an alkaline earth metal-containing compound.

In order to supply the missing teaching, the Office has relied upon Mizuno. According to the Office, Mizuno teaches that it is conventional to add a solidifier "or a detergent" in the form of a calcium compound into an engine fuel so that the calcium compound readily reacts with at least one of sulfur and phosphorus during combustion. Outstanding Office Action, page 4.

Contrary to the office's teachings, Mizuno does not expressly mention the term "detergent". Nor does Mizuno refer to the calcium containing compounds disclosed as detergents. Instead, Mizuno refers to these compounds as "solidifiers". Abstract and Mizuno, column 12, lines 9-26. The solidifiers act to solidify sulfur. Column 9, line 24.

Thus, Mizuno does not teach calcium compounds as detergents, but instead teaches solidifiers. Furthermore, there is no evidence on the record that the compounds of Mizuno would be considered detergents. Without some teaching in support of the position that the calcium compounds of Mizuno are detergents, the claimed detergent comprising an alkaline earth metal-containing compound is not taught or suggested by the Guinther/Mizuno combination.

Furthermore, neither Guinther nor Mizuno teach the claimed detergent in a two-stroke engine fuel. Instead, for reasons previously argued on the record, the calcium in the example of Guinther is part of a four stroke diesel engine oil analysis of a heavy duty diesel oil. See Amendment dated July 6, 2007, page 8. Further, Mizuno does not mention a two-stroke engine, and thus cannot provide the missing teachings.

For similar reasons, the Guinther/Mizuno combination also fails to teach the methods of claims 8 and 19. Independent claim 8 recites a method that includes, among other things, intaking a fuel composition into a combustion system of a two-stroke engine, wherein the fuel comprises a combustible hydrocarbonaceous liquid fuel; lubricant comprising an oil of lubricating viscosity; a detergent comprising an alkaline earth metal-containing compound; and a molybdenum source. Independent claim 19 is directed to a method for improving the durability of an after-treatment device for a two-stroke engine having a combustion chamber, comprising among other things,

combusting a fuel composition containing a combustible hydrocarbonaceous liquid fuel; lubricant comprising an oil of lubricating viscosity; a detergent comprising an alkaline earth metal-containing compound; and a molybdenum source in the combustion chamber.

As discussed above, neither Guinther or Mizuno specifically teach a detergent comprising an alkaline earth metal-containing compound. And for the reasons discussed above, neither Guinther or Mizuno teach any method for employing such a detergent in a fuel employed in a two-stroke engine. Because Guinther and Mizuno both fail to teach or suggest a detergent comprising an alkaline earth metal-containing compound in a fuel employed in a two-stroke engine, every limitation as recited in claims 8 and 19 is not taught.

Claims 2-6, 9-18 and 20 depend either directly or indirectly from, and therefore incorporate the limitations of, one of claims 1, 8 or 19. Accordingly, the Guinther/Mizuno combination also fails to teach or suggest every element of these claims for the reasons set forth above.

Because every element of the claims is not taught or suggested, no *prima facie* case of obviousness exists and the rejection should be withdrawn.

**Rejection Under 35 U.S.C. § 103**

The Office has rejected claim 7 under 35 U.S.C. 103(a) as being unpatentable over Guinther in view of Mizuno, as applied above, and further in view of legal precedent, for the reasons provided at page 7 of the outstanding Office Action. Applicants respectfully traverse the rejection.

Claim 7 depends from, and therefore incorporates the limitations of, claim 1. For the reasons discussed above, Guinther and Mizuno fail to teach or suggest a two-stroke engine fuel comprising an alkaline earth metal-containing compound. The Examiner has failed to provide any additional reference or line of reasoning that would suggest or supply the missing teachings. Because every limitation of the claims is not taught or suggested, no *prima facie* case of obviousness has been established, and the rejection should be withdrawn.

**CONCLUSION**

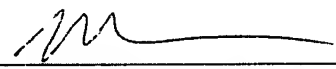
In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

If after consideration of this Amendment there are any outstanding issues the Examiner believes could be resolved by a telephonic interview, the Examiner is invited to call Applicants' undersigned representative at 703-917-0000, ext. 103, in order to expedite resolution of the issues and allowance of the application.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-2961.

Respectfully submitted,

Dated: November 8, 2007

By:   
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